

This Listing of Claims will replace all prior versions and Listings of Claims in the application:

LISTING OF CLAIMS:

Claims 1-2 (Previously Canceled)

Claim 3 (Canceled)

Claim 4 (Previously Amended) A semiconductor device comprising:

capacitor structures, each having a first gate insulating film formed on a semiconductor substrate of a first conductivity type, and a first gate electrode formed on the first gate insulating film; and

electric fuse elements, each having a second gate insulating film formed on the semiconductor substrate and having an impurity concentration higher than that of the first gate insulating film, and a second gate electrode formed on the second gate insulating film, wherein information is written in the electric fuse element depending on whether the second gate insulating film is dielectrically broken down, and a writing voltage of the electric fuse element is determined by dielectric breakdown resistance of the second gate insulating film which depends on the impurity concentration of the second gate insulating film;

an impurity diffusion layer of a second conductivity type, which is formed in at least a portion of the semiconductor substrate, the impurity diffusion layer being paired with the second gate electrode and serving as one electrode of the electric fuse element; and

a leading electrode electrically connected to an extended portion of the impurity diffusion layer extending to a region of the semiconductor substrate where no second electrode exists.

Claims 5-18 (Previously Canceled)

Claim 19 (Canceled)

Claim 20 (Previously Presented) The semiconductor device according to claim 3, wherein at least a part of the impurity diffusion layer is located directly underneath at least a part of the second gate electrode.

Claims 21-22 (Canceled)

Claim 23 (Currently Amended) A semiconductor device comprising:
capacitor structures, each having a first gate insulating film formed on a semiconductor
substrate of a first conductivity type, and a first gate electrode formed on the first gate insulating
film;
electric fuse elements, each having a second gate insulating film formed on the
semiconductor substrate and having an dielectric breakdown resistance lower than that of the
first gate insulating film, and a second gate electrode formed on the second insulating film, an
information being written in the electric fuse element depending on whether the second gate
insulating film is dielectrically broken down, a writing voltage of the electric fuse element being
determined by dielectric breakdown resistance of the second gate insulating film; and
an impurity diffusion layer of a second conductivity type, which is formed in at least a
portion of the semiconductor substrate, the impurity diffusion layer being paired with the second
gate electrode and serving as one electrode of the electric fuse, the impurity diffusion layer being
formed by impregnating an impurity of the second conductivity through the second gate
insulating film into the semiconductor substrate, and the dielectric breakdown resistance of the
second gate insulating layer being controlled by the impurity passing through the second gate
insulating film; and

~~The semiconductor device according to claim 21, further comprising:~~

a leading electrode electrically connected to an extended portion of the impurity diffusion layer extending to a region of the semiconductor substrate where no second electrode exists.